

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (original) A circular clarifier for separating separable matter from a liquid,
comprising:

- (a) an influent supply for introducing said liquid into said clarifier to a fill level
- (b) an outlet for discharging effluent from said clarifier;
- (c) at least one flocculent collection trough extending within said clarifier proximate
said fill level; and
- (d) at least one rotatable flocculent handling assembly, wherein each flocculent
handling assembly comprises:
 - (i) a beach movable at an elevation below said trough; and
 - (ii) a scraper assembly comprising a scraper blade extending upwardly from
said beach above said fill level, wherein said scraper assembly is
moveable relative to said beach to an elevation above said trough when
said flocculent handling assembly traverses past said trough.

Claim 2 (original) The clarifier as defined in claims 1, wherein said clarifier comprises a plurality of spaced-apart troughs subdividing said clarifier into a plurality of treatment regions, each of said treatment regions being defined between an adjacent pair of said troughs.

Claim 3 (original) The clarifier as defined in Claim 2, wherein scraper assembly is movable relative to said beach to an elevation above each one of said troughs when said flocculent handling assembly traverses thereby.

Claim 4 (original) The clarifier as defined in Claim 3, wherein said clarifier further comprises a central hub and a peripheral wall, said hub and said wall defining a container therebetween for containing said liquid, wherein said troughs extend between said hub and said wall at fixed locations.

Claim 5 (original) The clarifier as defined in Claim 4, wherein said troughs are radially extending.

Claim 6 (original) The clarifier as defined in Claim 4, wherein said central hub is stationary and wherein said influent supply comprises a plurality of spaced-apart influent inlet ports for permitting regulated flow of said liquid from an interior of said hub into said treatment regions.

Claim 7 (original) The clarifier as defined in Claim 6, wherein hub comprises a plurality of spaced-apart feed ports, wherein each of said feed ports is adjustable to an open position in communication with at least one of said treatment regions.

Claim 8 (original) The clarifier as defined in Claim 7, wherein said influent inlet ports are formed on a first rotatable ring, wherein rotation of said first rotatable ring relative to said hub

periodically brings said inlet ports into at least partial register with said feed ports to permit the introduction of said liquid into said treatment regions.

Claim 9 (original) The clarifier as defined in Claim 8, wherein rotation of said first rotatable ring is timed so that said liquid is introduced into each of said treatment regions at a location behind the direction of travel of said flocculent handling assembly, wherein said liquid in advance of said flocculent handling assembly is thereby maintained relatively quiescent.

Claim 10 (original) The clarifier as defined in Claim 9, wherein said liquid is introduced into said treatment regions in sequence, wherein at any given time some of said feed ports are at least partially open and some of said feed ports are closed.

Claim 11 (original) The clarifier as defined in Claim 10, wherein said clarifier comprises a plurality of spaced-apart flocculent handling assemblies each rotatable around said hub.

Claim 12 (original) The clarifier as defined in Claim 11, wherein each of said flocculent handling assemblies comprises a radially extending beach and a radially extending scraper.

Claim 13 (original) The clarifier as defined in Claim 11, wherein rotation of said plurality of said flocculent handling assemblies is driven by a common drive.

Claim 14 (original) The clarifier as defined in Claim 11, wherein each of said flocculent handling assemblies is coupled to a second rotatable ring rotatable relative to said hub.

Claim 15 (original) The clarifier as defined in Claim 14, wherein the number of said flocculent handling assemblies differs from the number of said troughs.

Claim 16 (original) The clarifier as defined in Claim 15, wherein the number of said troughs is less than the number of said flocculent handling assemblies.

Claim 17 (original) The clarifier as defined in Claim 16, wherein said clarifier comprises four of said troughs and five of said flocculent handling assemblies.

Claim 18 (original) The clarifier as defined in Claim 15, wherein the number of said troughs is more than the number of said flocculent handling assemblies.

Claim 19 (original) The clarifier as defined in Claim 15, wherein only one of said scraper assemblies traverses over one of said troughs at any given time.

Claim 20 (original) The clarifier as defined in Claim 11, further comprises a holding tank extending within an interior of said hub and a plurality of flocculent discharge ports adjustable to an open position in communication with said holding tank for periodically permitting discharge of flocculent from said troughs into said holding tank.

Claim 21 (original) The clarifier as defined in Claim 20, wherein each of said troughs is inclined toward one of said discharge ports.

Claim 22 (original) The clarifier as defined in Claim 21, further comprising an annular outer baffle located in an upper portion of said container in the vicinity of said peripheral wall and an inner baffle surrounding said hub, wherein each of said troughs extends radially between said inner and outer baffles.

Claim 23 (original) The clarifier as defined in Claim 22, wherein said discharge ports are formed on said inner baffle.

Claim 24 (original) The clarifier as defined in Claim 23, further comprising a third portable ring moveable around said hub and comprising a plurality of spaced-apart flocculent outlet ports, wherein said flocculent is intermittently discharged through said discharge ports when said flocculent outlet ports are brought into at least partial register with said discharge ports.

Claim 25 (original) The clarifier as defined in Claim 24, wherein said first and said third rotatable rings are operatively coupled together and rotate in unison.

Claim 26 (original) The clarifier as defined in Claim 25, wherein said first and third rotatable rings are formed on a cylindrical tube rotatable about said hub.

Claim 27 (original) The clarifier as defined in Claim 26 wherein said third ring is disposed above said first ring.

Claim 28 (original) The clarifier as defined in Claim 27, wherein said second ring is coupled to said cylindrical tube and is rotatable therewith.

Claim 29 (original) The clarifier as defined in Claim 2, wherein said scraper assembly rotates substantially in unison with said beach between said troughs.

Claim 30 (original) The clarifier as defined in Claim 8, wherein said influent supply comprises an influent supply chamber in fluid communication with said feed ports for aerating said liquid upstream from said feed ports, wherein said separable matter is separable from said liquid by gas flotation clarification.

Claim 31 (original) The clarifier as defined in claim 30, wherein said influent supply chamber receives a first stream of said liquid comprising dissolved gas from an influent source upstream from said influent supply chamber.

Claim 32 (original) The clarifier as defined in Claim 31, further comprising a holding tank in fluid communication with said influent source for receiving said flocculent from said troughs and recirculating said flocculent to said influent source.

Claim 33 (original) The clarifier as defined in Claim 32, further comprising at least one fluid recycle port adjustable between open and closed positions for regulating flow from said influent supply chamber into said holding tank.

Claim 34 (original) The clarifier as defined in Claim 33, wherein said influent supply chamber and said holding tank are located within said central hub and are in fluid communication when said recycle port is in said open position.

Claim 35 (original) The clarifier as defined in Claim 34, further comprising a sediment recycle port for adjustably permitting passage of any sediment settling in a bottom portion of said container into said holding tank.

Claim 36 (original) The clarifier as defined in Claim 35, further comprising a plurality of rake assemblies for conveying said sediment toward said sediment recycle port, wherein each of said rake assemblies extends underneath a corresponding beach and is movable therewith.

Claim 37 (original) The clarifier as defined in Claim 4, wherein said beach comprises an upper surface extending in a substantially horizontal plane and movable through said container below said fill level.

Claim 38 (original) The clarifier as defined in Claim 37, wherein a surface layer comprising flocculent forms at said fill level of said liquid within said container, and wherein said beach creates a shear plane proximate a lower portion of said surface layer as said beach moves through said container.

Claim 39 (original) The clarifier as defined in Claim 38, wherein said beach has the shape of a truncated segment of a circle.

Claim 40 (original) The clarifier as defined in Claim 39, wherein said beach is coupled to a third rotatable ring rotatable about said hub.

Claim 41 (original) The clarifier as defined in Claim 40, further comprising a plurality of generally vertically disposed baffles extending outwardly from said third rotatable ring between said beaches.

Claim 42 (original) The clarifier as defined in Claim 4, further comprising an outer weir surrounding said peripheral wall for collecting said effluent, wherein said weir is in communication with said outlet for discharging effluent from said container.

Claim 43 (original) The clarifier as defined in Claim 11, wherein rotation of said flocculent handling assemblies at locations between said troughs subdivides each treatment region

receiving a flocculent handling assembly into a float subzone in advance of said flocculent handling assembly and a fill subzone in behind of said flocculent handling assembly.

Claim 44 (original) The clarifier as defined in Claim 43, wherein said beach defines the lower boundary of said float subzone as said beach approaches a next-in-sequence one of said troughs.

Claim 45 (original) The clarifier as defined in Claim 38, wherein a surface layer comprising said flocculent forms at said fill level within said float subzone, and wherein said beach creates a shear plane proximate a lower portion of said surface layer as said beach moves through said treatment region.

Claim 46 (original) The clarifier as defined in Claim 45, wherein said troughs extend a short distance above said fill level.

Claim 47 (original) The clarifier as defined in Claim 46, wherein said float subzone progressively decreases in size and said fill subzone progressively increases in size as said flocculent handling assembly traverses said treatment region, thereby causing at least part of said surface layer in said float subzone to rise above said fill level and gently spill over a front edge of said next-in-sequence trough for collection of flocculent therein.

Claim 48 (original) The clarifier as defined in Claim 47, wherein said flocculent handling assembly increases the concentration of said flocculent within said float subzone.

Claim 49 (original) The clarifier as defined in Claim 4, wherein said trough has the shape of a truncated segment of a circle and comprises a front edge, a rear edge and a trough bottom surface extending therebetween.

Claim 50 (original) The clarifier as defined in Claim 49, wherein said scraper assembly comprises an elongated scraper blade a vertical adjustment assembly for lifting said scraper blade in the vicinity of said trough front edge and lowering said scraper blade in the vicinity of said trough rear edge.

Claim 51 (original) The clarifier as defined in Claim 50, wherein a bottom edge of said scraper blade contacts said beach at positions between said troughs.

Claim 52 (original) The clarifier as defined in Claim 51, wherein said vertical adjustment assembly comprises a leading support arm and a trailing support arm each extending between a first end proximate an inner portion of said container and a second end proximate an outer portion of said container, said vertical adjustment assembly further comprising a mechanical linkage coupling said support arms to each other and to said scraper blade, and an actuator for varying the angular spacing between said support arms thereby causing vertical displacement of said scraper blade.

Claim 53 (original) The clarifier as defined in Claim 52, wherein said scraper blade extends radially between said inner and outer portions of said container, and wherein said scraper blade rotates in a first arc in a plane of rotation within said container.

Claim 54 (original) The clarifier as defined in claim as defined in Claim 53, wherein said support arms move in a second arc in a support plane parallel to said plane of rotation, wherein said support arms extend along a radial axis of said second arc.

Claim 55 (original) The clarifier as defined in Claim 54, wherein said support plane is disposed above said plane of rotation.

Claim 56 (original) The clarifier as defined in Claim 55, wherein said actuator comprises a cam assembly operatively coupled to said leading support arm.

Claim 57 (original) The clarifier as defined in Claim 56, wherein said cam assembly comprises:

- (a) a cam ring mounted on an actuator support structure, said ring having at least one cam surface formed thereon; and
- (b) a roller coupled to said first end of said first support arm and located on an inner surface of a second ring rotatable relative to said hub, wherein said roller is movable on said cam surface as said second ring rotates relative to said hub to vary the angular distance between said support arms.

Claim 58 (original) The clarifier as defined in Claim 57, further comprising a drive for driving rotation of said second ring relative to said hub.

Claim 59 (original) The clarifier as defined in Claim 57, wherein said second ring comprises at least one slot for receiving said first end of said trailing support arm.

Claim 60 (original) The clarifier as defined in Claim 59, further comprising an adjustable length tie bar coupling said second end of said leading support arm to said second ring.

Claim 61 (original) The clarifier as defined in Claim 60, wherein said second end of each of said support arms is supported for travel in said second arc.

Claim 62 (original) The clarifier as defined in Claim 61, wherein said scraper assembly is adapted for travel over a peripheral outer wall located remote from said actuator support structure, wherein each of said support arms has a roller mounted on said second end thereof for rolling motion on an upper surface of said peripheral wall.

Claim 63 (original) The clarifier as defined in Claim 59, wherein the relative angular velocity of said trailing support arm is reduced when said angular distance between said first and second support arms increases and wherein the relative angular velocity of said trailing support arm is increased when said angular distance between said first and second support arms is reduced.

Claim 64 (original) The clarifier as defined in Claim 55, wherein said support arms extend in said support plane along radial lines corresponding to opposed truncated edges of an outwardly extending first rhombic pyramid having an apex proximate said first end.

Claim 65 (original) The clarifier as defined in Claim 64, wherein said linkage comprises a plurality of first V-shaped first linkage elements extending between said support arms, wherein each of said first linkage elements comprises a first segment connected to said leading support arm and a second segment connected to said trailing support arm, wherein said first and second segments are connected together at first connectors disposed between said support arms, wherein each of said first connectors is located on a radial axis intersecting said first connectors and corresponding to an edge of said rhombic pyramid located between said opposed edges.

Claim ~~65~~ 66 (amended) The clarifier as defined in Claim ~~64~~ 65, wherein said linkage further comprises a stabilizer shaft extending along said radial axis intersecting said first connectors between at least some of said first connectors.

Claim ~~66~~ 67 (amended) The clarifier as defined in Claim ~~65~~ 66, wherein said linkage further comprises a plurality of second linkage elements for coupling said first connectors to said scraper blade.

Claim ~~67~~ 68 (amended) The clarifier as defined in Claim ~~66~~ 67, wherein said linkage comprises a plurality of spaced-apart second connectors on said scraper blade, wherein each of said second connectors is (a) coupled to a corresponding one of said first connectors and (b) is located on said scraper blade at a location in a plane extending perpendicular to said plane of rotation and passing through said trailing support arm at a location where one of said first linkage elements is connected thereto.

Claim ~~68~~ 69 (amended) The clarifier as defined in Claim ~~67~~ 68, wherein at least some of said second linkage elements each further comprise a third connector disposed between said first and second connectors, wherein said third connector is supported for movement in a plane perpendicular to said plane of rotation along an axis intersecting a corresponding one of said first connectors.

Claim ~~69~~ 70 (amended) The clarifier as defined in claim ~~68~~ 69, wherein said second linkage elements further comprise third, fourth, fifth and sixth segments together defining a rhombic shape for linking said first and third connectors together, wherein said rhombic shape corresponds to the cross-sectional shape of an inwardly projecting second rhombic pyramid having its apex on said radial axis intersecting said first connectors.

Claim ~~70~~ 71 (amended) The clarifier as defined in claim ~~69~~ 70, further comprising a seventh segment for coupling said each of said third connectors to a corresponding one of said second connectors.

Claim ~~71~~ 72 (amended) A method of treating liquid influent in a circular clarifier having a container for holding said influent and at least one trough extending at approximately the fill level of said influent within said container, said method comprising:

- (a) introducing said influent into a treatment region of said container in the vicinity of said trough;
- (b) causing a fraction of said influent comprising separable matter to form a surface layer of flocculent in a flotation subzone of said treatment region;
and
- (c) confining said flocculent within said flotation subzone and gradually decreasing the volume of said flotation subzone to cause said flocculent to rise above said fill level and gently spill into said trough without substantially disrupting said flocculent.

Claims ~~72-100~~ (canceled)

Claim ~~100~~ 101 (amended) A clarifier for separating separable matter from a liquid, comprising:

- (a) a container for holding said liquid;

- (b) a plurality of troughs extending in said container at spaced-apart locations, wherein said troughs extend at approximately the surface level of said liquid in said container;
- (c) a plurality of spaced-apart beaches rotatable relative to said troughs within said container at an elevation below said troughs; and
- (d) a plurality of scraper blades, each of said blades extending upwardly from a corresponding one of said beaches and being rotatable therewith, wherein said scraper blades subdivide said container into a plurality of liquid treatment cells, each of said treatment cells being defined between two of said scraper blades.

Claim ~~401~~ 102 (amended) The clarifier as defined in claim ~~400~~ 101, wherein each of said scraper blades is movable relative to said corresponding one of said beaches to an elevation above said troughs when said corresponding one of said beaches traverses past one of said troughs.

Claim ~~402~~ 103 (amended) The clarifier as defined in claim ~~400~~ 101, wherein each of said beaches has a leading edge and a trailing edge and wherein each of said scraper blades extends upwardly from said corresponding one of said beaches proximate said trailing edge thereof.

Claim ~~403~~ 104 (amended) The clarifier as defined in claim ~~402~~ 103, wherein said clarifier comprises

- (a) a central hub and a peripheral wall, said container being defined therebetween;
- (b) an influent supply chamber located within an interior of said hub for receiving a supply of said liquid; and
- (c) a plurality of spaced-apart fluid feed ports formed in said hub for introducing said liquid from said influent supply chamber into at least some of said treatment cells within said container.

Claim ~~104~~ 105 (amended) The clarifier as defined in claim ~~103~~ 104, wherein said central hub and said peripheral wall are cylindrical and wherein each of said troughs and said beaches extends from said hub to said peripheral wall.

Claim ~~105~~ 106 (amended) The clarifier as defined in claim ~~104~~ 105, further comprising a first rotatable ring having a plurality of influent inlet ports formed therein at spaced locations, wherein said first ring is rotatable relative to said hub to periodically bring said inlet ports into alignment with said feed ports.

Claim ~~106~~ 107 (amended) The clarifier as defined in claim ~~105~~ 106, wherein said beaches are coupled to a second rotatable ring and wherein said scraper blades are coupled to a third rotatable ring, wherein each of said second and third rotatable rings are rotatable relative to said hub.

Claim ~~107~~ 108 (amended) The clarifier as defined in claim ~~106~~ 107, wherein said first, second and third rotatable rings are operatively connected together.

Claim ~~108~~ 109 (amended) The clarifier as defined in claim ~~107~~ 108, wherein said first, second and third rotatable rings form portions of a cylinder rotatable relative to said hub.

Claim ~~109~~ 110 (amended) The clarifier as defined in claim ~~107~~ 108, wherein said hub and said troughs are stationary, and wherein each of said troughs has a front edge and a rear edge.

Claim ~~110~~ 111 (amended) The clarifier as defined in claim ~~109~~ 110, wherein each of said treatment cells is defined between a leading scraper blade and a trailing scraper blade, each of said treatment cells being movable past each of said troughs in sequence in a direction of rotation.

Claim ~~111~~ 112 (amended) The clarifier as defined in claim ~~110~~ 111, wherein said liquid is introduced into each one of said treatment cells during a fill period commencing when said leading scraper blade passes said rear edge of one of said troughs and ending when said trailing scraper blade passes said rear edge of said one of said troughs.

Claim ~~112~~ 113 (amended) The clarifier as defined in claim ~~111~~ 112, wherein said one of said treatment cells is subdivided during at least part of said fill period into a fill subzone between said leading scraper blade and said one of said troughs and a float subzone between said trailing scraper blade and said one of said troughs, wherein said fill subzone expands in size and said float subzone contracts in size as said one of said treatment cells moves relative to said one of said troughs.

Claim ~~113~~ 114 (amended) The clarifier as defined in claim ~~112~~ 113, wherein said one of said treatment cells is not in fluid communication with said influent supply chamber during a dwell period commencing when said leading scraper blade passes said front edge of said one of said troughs and ending when said leading scraper blade passes said rear edge of said one of said troughs.

Claim ~~114~~ 115 (amended) The clarifier as defined in claim ~~113~~ 114, wherein at least one of said feed ports in communication with said fill subzone is at least partially aligned with one of said inlet ports during said fill period to permit introduction of said liquid into said fill subzone during said fill period.

Claim ~~115~~ 116 (amended) The clarifier as defined in claim ~~114~~ 115, wherein said influent is not introduced directly into said float subzone during said fill period, wherein said liquid is substantially quiescent in said float subzone in advance of said trailing scraper blade as it rotates in said direction of rotation.

Claim ~~116~~ 117 (amended) The clarifier as defined in claim ~~115~~ 116, wherein said container comprises a plurality of container regions each defined between said one of said troughs and a next-in-sequence one of said troughs, wherein said next-in-sequence one of said troughs is located at a position angularly spaced-apart from said one of said troughs in said direction of rotation, wherein each of said inlet ports formed on said hub is in communication with one of said container regions when said inlet port is at least partially aligned with one of said feed ports.

Claim ~~117~~ 118 (amended) The clarifier as defined in claim ~~116~~ 117, wherein said leading scraper blade is aligned with said rear edge of said next-in-sequence one of said troughs when said trailing scraper blade is aligned with said front edge of said one of said troughs at the end of said fill period.

Claim ~~118~~ 119 (amended) The clarifier as defined in claim ~~116~~ 117, wherein said leading edge of a corresponding one of said beaches extending below said leading scraper blade is aligned with said front edge of said next-in-sequence one of said troughs when said trailing scraper blade is aligned with said front edge of said one of said troughs.

Claim ~~119~~ 120 (amended) The clarifier as defined in claim ~~113~~ 114, wherein a layer of suspended solids forms on the surface of said liquid in said float subzone, wherein the volume of said float subzone decreases as said trailing scraper blade and said corresponding one of said beaches moves in said direction of rotation toward one of said troughs, thereby causing at least part of said layer of suspended solids to rise in said float subzone and gently spill into said one of said troughs.

Claim ~~120~~ 121 (amended) The clarifier as defined in claim ~~119~~ 120, further comprising a plurality of flocculent discharge ports at locations spaced-around said central hub for discharging flocculent collection ~~eh~~ from a corresponding one of said troughs into a holding tank located within said interior of said hub, wherein each of said discharge ports is adjustable between open and closed positions.

Claim ~~121~~ 122 (amended) The clarifier as defined in claim ~~120~~ 121, wherein said each of said flocculent discharge ports is adjusted from said closed to said open position when said trailing scraper blade is proximate said corresponding one of said troughs.

Claim ~~122~~ 123 (amended) The clarifier as defined in claim ~~121~~ 122, wherein each of said flocculent discharge ports is adjusted from said open position to said closed position when said trailing scraper blade moves vertically above a corresponding one of said beaches to an elevation above said one of said troughs, wherein said trailing scraper blade blocks flow of said liquid into said one of said troughs when said corresponding discharge port is closing.

Claim ~~123~~ 124 (amended) The clarifier as defined in claim ~~122~~ 123, wherein said discharge ports open in sequence as said scraper blades and said beaches move in said direction of rotation.

Claim ~~124~~ 125 (amended) The clarifier as defined in claim ~~123~~ 124, further comprising a plurality of flocculent outlet ports formed on second rotatable ring, wherein each of said discharge ports is adjusted to said open position when it is brought into alignment with one of said outlet ports.

Claim ~~125~~ 126 (amended) The clarifier as defined in claim ~~124~~ 125, wherein each of said flocculent outlet ports is located above a corresponding one of said beaches.

Claim ~~126~~ 127 (amended) The clarifier as defined in claim ~~125~~ 126, wherein a differential head is established across said second rotatable ring between each of said troughs and said

Appl. No. 10/801,383
Amdt. dated September 22, 2006
Reply to Office action of June 29, 2006

holding tank, wherein a substantial portion of said flocculent flows into said holding tank from said troughs when said discharge ports are open without the use of pumps.

Claim ~~127~~ 128 (amended) The clarifier as defined in claim ~~126~~ 127, wherein each of said troughs is inclined toward a corresponding one of said discharge ports.

Claim ~~128~~ 129 (amended) The clarifier as defined in claim ~~124~~ 125, wherein said second rotatable ring comprises multiple spaced-apart ones of said outlet ports, wherein each of said discharge ports open multiple times during each revolution of said second rotatable ring.

Claim ~~129~~ 130 (amended) The clarifier as defined in claim ~~125~~ 126, wherein said clarifier comprises four discharge ports and five outlet ports, wherein each of said discharge ports opens five times during each revolution of said second rotatable ring.

Claim ~~130~~ 131 (amended) The clarifier as defined in claim ~~124~~ 125, further comprising a plurality of radial distribution baffles, wherein each of said baffles extends beneath a corresponding one of said beaches and comprises an outer portion extending underneath said baffle trailing end and an inner portion nearest said hub extending between said baffle leading and trailing ends.

Claim ~~131~~ 132 (amended) The clarifier as defined in claim ~~116~~ 117, wherein each of said scraper blades traverse substantially all of the exposed surface of said container regions between said troughs.

Appl. No. 10/801,383
Amdt. dated September 22, 2006
Reply to Office action of June 29, 2006

Claim ~~132~~ 133 (amended) The clarifier as defined in claim ~~104~~ 105, wherein said troughs and beaches extend radially between said central hub and said peripheral wall.

Claim ~~133~~ 134 (amended) The clarifier as defined in claim ~~124~~ 125, wherein each of said discharge ports is approximately one half the width of an innermost end of each of said troughs.

Claim ~~134~~ 135 (amended) The clarifier as defined in claim ~~103~~ 104, wherein said liquid moves in a first direction in said container and in a second direction opposite said first direction in said influent supply chamber.

Claim ~~135~~ 136 (amended) The clarifier as defined in claim ~~103~~ 104, wherein said liquid is introduced into said container continuously.

Claims 137-164 (canceled)